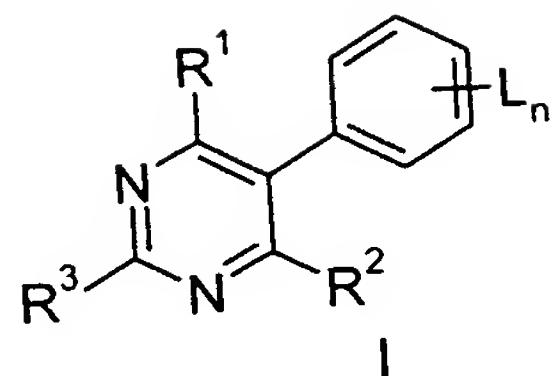


We claim:

1. A pyrimidine of the formula I



5

in which the index and the substituents are as defined below:

n is an integer from 1 to 5;

10 L is halogen, cyano, nitro, cyanato (OCN), C₁-C₈-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₁-C₆-alkoxy, C₂-C₁₀-alkenyloxy, C₂-C₁₀-alkynyloxy, C₃-C₆-cycloalkyl, C₃-C₆-cycloalkenyl, C₃-C₆-cycloalkoxy, C₃-C₆-cycloalkenyloxy, -C(=S)-N(A')A, -C(O)-A, -C(=O)-O-A, -C(=O)-N(A')A, C(A')(=N-OA), N(A')A, N(A')-C(=O)-A, N(A")-C(=O)-N(A')A, S(=O)_m-A, S(=O)_m-O-A or S(=O)_m-N(A')A;

15

m is 0, 1 or 2;

20 A, A', A" independently of one another are hydrogen, C₁-C₆-alkyl, C₂-C₆-alkenyl, C₂-C₆-alkynyl, C₃-C₈-cycloalkyl, C₃-C₈-cycloalkenyl, where the organic radicals may be partially or fully halogenated or may be substituted by cyano or C₁-C₄-alkoxy, or A and A' together with the atoms to which they are attached are a five- or six-membered saturated, partially unsaturated or aromatic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S;

25

R¹ is C₁-C₁₀-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₃-C₁₂-cycloalkyl, C₃-C₁₀-cycloalkenyl, phenyl or a five- to ten-membered saturated, partially unsaturated or aromatic heterocycle which is attached via carbon and which contains one to four heteroatoms from the group consisting of O, N and S;

30

R² is halogen, cyano, C₁-C₄-alkyl, C₂-C₄-alkenyl, C₂-C₄-alkynyl, C₁-C₄-alkoxy, C₃-C₄-alkenyloxy or C₃-C₄-alkynyloxy;

35

R^3 is a five- or six-membered saturated, partially unsaturated or aromatic mono- or bicyclic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S,

5 where the aliphatic, alicyclic or aromatic groups of the radical definitions of L, R^1 , R^2 and/or R^3 for their part may be partially or fully halogenated or may carry one to four groups R^a :

10 R^a is halogen, cyano, C_1-C_8 -alkyl, C_2-C_{10} -alkenyl, C_2-C_{10} -alkynyl, C_1-C_6 -alkoxy, C_2-C_{10} -alkenyloxy, C_2-C_{10} -alkynyloxy, OH, SH, two vicinal groups R^a may be (=O) or (=S), C_3-C_6 -cycloalkyl, C_3-C_6 -cycloalkenyl, C_3-C_6 -cycloalkoxy, C_3-C_6 -cycloalkenyloxy, -C(=O)-A, -C(=O)-O-A, -C(=O)-N(A')A, C(A')(=N-OA), N(A')A, N(A')-C(=O)-A, N(A")-C(=O)-N(A')A, S(=O)_m-A, S(=O)_m-O-A or S(=O)_m-N(A')A, where m, A, A', A" are as defined above and where the aliphatic, alicyclic or aromatic groups for their part may be partially or fully halogenated or may carry one to three groups R^b , where R^b has the same meaning as R^a .

15 2. A pyrimidine as claimed in claim 1, in which the index and the substituents are as defined below:

20 L is halogen, cyano, C_1-C_8 -alkyl, C_2-C_{10} -alkenyl, C_2-C_{10} -alkynyl, C_1-C_6 -alkoxy, C_2-C_{10} -alkenyloxy, C_2-C_{10} -alkynyloxy, -C(=O)-O-A, N(A')-C(=O)-A or S(=O)_m-A;

25 m is 0, 1 or 2;

30 A, A', A" independently of one another are hydrogen, C_1-C_6 -alkyl, C_2-C_6 -alkenyl, C_2-C_6 -alkynyl, C_3-C_8 -cycloalkyl, where the organic radicals may be partially or fully halogenated or A and A' together with the atoms to which they are attached are a partially unsaturated or aromatic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S;

35 R^1 is C_1-C_{10} -alkyl, C_2-C_{10} -alkenyl, C_2-C_{10} -alkynyl, C_3-C_{12} -cycloalkyl, C_3-C_{10} -cycloalkenyl;

R^2 is C_1-C_4 -alkyl, cyano or chlorine,

40 where the aliphatic, alicyclic or aromatic groups of the radical definitions of L, R^1 and/or R^3 for their part may be partially or fully halogenated or may carry one to

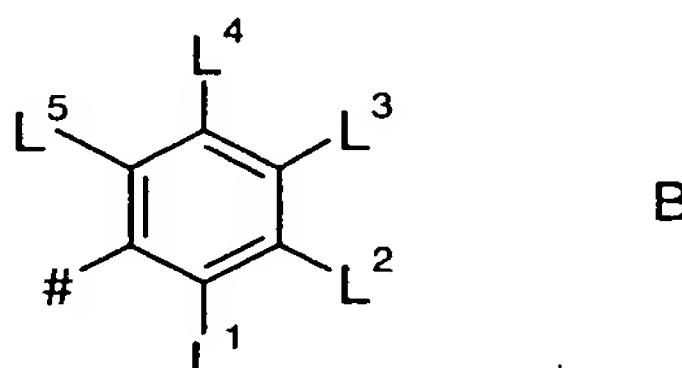
four groups R^a:

R^a is halogen, cyano, C₁-C₈-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₁-C₆-alkoxy, C₂-C₁₀-alkenyloxy, C₂-C₁₀-alkynyloxy, C₃-C₆-cycloalkyl, C₃-C₆-cycloalkenyl, C₃-C₆-cycloalkoxy, C₃-C₆-cycloalkenyloxy, -C(=O)-A, -C(=O)-O-A, -C(=O)-N(A')A, C(A')(=N-OA), N(A')A, N(A')-C(=O)-A, N(A")-C(=O)-N(A')A, S(=O)_m-A, S(=O)_m-O-A or S(=O)_m-N(A')A.

3. A pyrimidine as claimed in claim 1, in which R³ is pyrrolyl, pyrazolyl, imidazolyl, 1,2,3-triazolyl, 1,2,4-triazolyl, tetrazolyl, oxazolyl, isoxazolyl, 1,3,4-oxadiazolyl, furanyl, thiophenyl, thiazolyl, isothiazolyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, 1,2,3-triazinyl, 1,2,4-triazinyl, pyrrolidinyl, piperidinyl, hexahydro-azepinyl or dihydropyridinyl, where the heterocycle may be attached to the pyrimidine ring via carbon or nitrogen and may carry up to three substituents R^a:

15 R^a is halogen, cyano, C₁-C₈-alkyl, C₂-C₁₀-alkenyl, C₂-C₁₀-alkynyl, C₁-C₆-alkoxy, C₂-C₁₀-alkenyloxy, C₂-C₁₀-alkynyloxy, OH, SH, two vicinal groups R^a may be (=O) or (=S), C₃-C₆-cycloalkyl, C₃-C₆-cycloalkenyl, C₃-C₆-cycloalkoxy, C₃-C₆-cycloalkenyloxy, -C(=O)-A, -C(=O)-O-A, -C(=O)-N(A')A, C(A')(=N-OA), N(A')A, N(A')-C(=O)-A, N(A")-C(=O)-N(A')A, S(=O)_m-A, S(=O)_m-O-A or S(=O)_m-N(A')A.

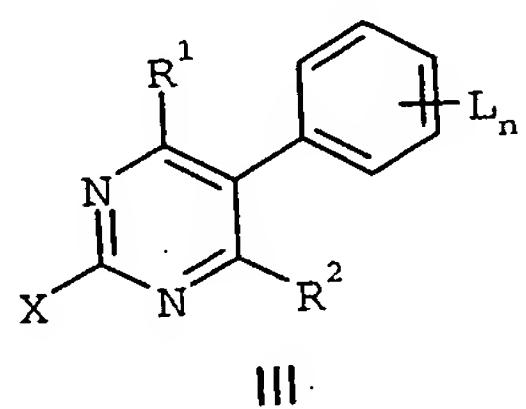
- 20 4. A pyrimidine as claimed in claim 1, where R³ is pyrazol-1-yl, 1,2,4-triazol-1-yl, pyridin-2-yl, pyrimidin-2-yl, pyridazin-3-yl, pyrrolidin-2-on-1-yl, piperidin-2-on-1-yl, hexahydro-2H-azepin-2-on-1-yl, pyrrolidin-2-thion-1-yl, piperidin-2-thion-1-yl, hexahydro-2H-azepin-2-thion-1-yl, 1,2-dihydropyridin-2-on-1-yl.
- 25 5. A pyrimidine as claimed in claim 1, where R² is methyl, chlorine or ethyl.
- 30 6. A pyrimidine as claimed in any of claims 1 to 6, where the phenyl group substituted by L_n is the group B



35 where # is the point of attachment to the pyrimidine skeleton and
L¹ is fluorine, chlorine, CH₃ or CF₃;
L², L⁴ independently of one another are hydrogen, CH₃ or fluorine;

L^3 is hydrogen, fluorine, chlorine, bromine, cyano, CH_3 , SCH_3 , OCH_3 , SO_2CH_3 , $CO-NH_2$, $CO-NHCH_3$, $CO-NHC_2H_5$, $CO-N(CH_3)_2$, $NH-C(=O)CH_3$, $N(CH_3)-C(=O)CH_3$ or $COOCH_3$ and
 L^5 is hydrogen, fluorine, chlorine or CH_3 .

- 5
7. A process for preparing pyrimidines of the formula I as claimed in claim 1, where
 R^3 is a nitrogen-containing heterocycle attached via nitrogen, which comprises
reacting a compound of the formula III,

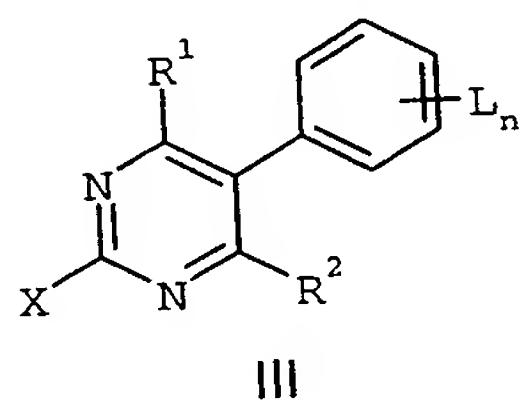


10

in which the substituents L , R^1 and R^2 are as defined in claim 1 and X is halogen,
C₁-C₆-alkoxy, C₁-C₆-alkylthio, C₁-C₆-alkylsulfoxyl or C₁-C₆-alkylsulfenyl, with a
heterocycle of the formula R^3-H (IV), if appropriate in the presence of a base.

15

8. An intermediate of the formula III



20

where the substituents R^1 and L_n are as defined in claim 1, X is as defined in
claim 7 and R^2 is cyano, C₁-C₄-alkyl, C₂-C₄-alkenyl, C₂-C₄-alkynyl, C₁-C₄-alkoxy,
C₃-C₄-alkenyloxy or C₃-C₄-alkynyloxy, where the alkyl, alkenyl and alkynyl
radicals of R^2 may be substituted by halogen, cyano, nitro, C₁-C₂-alkoxy or C₁-C₄-
alkoxycarbonyl.

25

9. Residual composition, which comprises a solid or liquid carrier and a compound
of the formula I as claimed in claim 1.

30

10. A method for controlling phytopathogenic harmful fungi, which comprises treating
the fungi or the materials, plants, the soil or seeds to be protected against fungal
attack with an effective amount of a compound of the formula I as claimed in
claim 1.